

**CORRECT NAMES FOR SPECIES OF *TACHYSPHEX* OBSERVED
BY EVANS (1970) AT JACKSON HOLE, WYOMING, WITH NEW
INFORMATION ON *T. ALPESTRIS* AND *T. SEMIRUFUS*
(HYMENOPTERA: SPHECIDAE)**

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Abstract.—The correct names are given for the five species of *Tachysphex* observed by Evans (1970) at Jackson Hole, Wyoming. Additional nesting information for *T. alpestris* and initial observations on *T. semirufus*, both based upon Evans' field notes, are detailed.

In 1970 Evans presented information on the nesting behaviors of five species of *Tachysphex* from Jackson Hole, Wyoming. The names provided for two of the species, *T. aethiops* (Cresson) and *T. tarsatus* (Say), are correct but the names of the three other species are incorrect. The purpose of the present paper is to correct the species names, utilizing W. J. Pulawski's determinations, and to report new information on one of the species, *T. alpestris* Rohwer, and on a previously unreported species, *T. semirufus* (Cresson), using H. E. Evans' field notes. This information is thus made available for inclusion in Pulawski's forthcoming revision of the North and Central American species of *Tachysphex*.

T. pauxillus Fox is the correct name for *T. nigrior* Fox (Pulawski, in Krombein, 1979). The behavior of this species (Evans, 1970) is very similar to that of *T. tarsatus* (see Williams, 1914). In fact Evans referred to this species in his Biological note no. 2129 as behaving "exactly like *tarsatus*, but . . . all black," because it captured a relatively large acridid, carried it on the ground into an open entrance, and stored only one prey in a single-celled nest.

Two of the other species observed by Evans (1970), *T. sp.* near *linsleyi* Bohart and *T. terminatus* (Smith), are actually *T. clarconis* Viereck and *T. alpestris*, respectively. Both species are members of the distinctive *terminatus* species group (Krombein, 1979), and, based upon Evans' ethological descriptions, both resemble *T. terminatus* in their nesting behaviors. Recently, Elliott and Kurczewski (1985) confirmed Evans' observations on *T. clarconis*. Both authors noted provisioning flights by the wasps, temporary closure of the nest entrance, and storage of several acridid nymphs per cell. In addition, Evans (1970) reported a two-celled nest for this species and Elliott and Kurczewski (1985) described leveling of the tumulus.

Evans (1970) noted *T. alpestris* (as *T. terminatus*) preying on small acridid nymphs, storing several per cell, making a temporary closure of the entrance, and

constructing a three-celled nest. Elliott and Kurczewski (1985) substantiated the use of nymphal Acrididae as prey of *T. alpestris*, and Evans' field notes [nos. 2016 (not 2013, as reported), 2033] provide additional behavioral information on this species. Prey transport was by flying and the three-celled nest contained three (no egg), two (egg), and 13 (egg) prey per cell, respectively. The burrow lengths were 5 cm for a single-celled nest and 8–10 cm for the three-celled nest.

The junior author (Biol. note no. 1989) also observed a female of *T. semirufus* (det. W. J. Pulawski) at Jackson Hole, Wyoming, but this observation was not reported in Evans (1970). The wasp proceeded forward on the ground, holding her prey with the mandibles by the bases of its antennae. She apparently did not use any of the legs to grasp the prey's body. Instead, she used her wings to assist in transport but did not attempt to fly. The wasp carried the prey about 5 m in a rather straight line directly into an open burrow. Two minutes later, she appeared headfirst in the entrance and began raking sand backward into the burrow. She came out 1–2 cm, backed into the tunnel, and packed in the sand, using directed blows from the end of the abdomen. In seven minutes the female had completed the closure by filling the burrow with the sand from the tumulus, but she left the entrance depressed slightly below the sand surface.

The burrow (ca. 3 cm long) entered obliquely the sandy soil mixed with stones, curved sharply, and ended in a cell about 1 cm deep. The single prey, a nymphal mormon cricket, *Anabrus simplex* Haldeman (Tettigoniidae) (det. A. B. Gurney) was placed in the cell in a head inward position. The wasp's egg was placed on the venter of the prey's thorax, possibly between the first two pairs of legs.

W. J. Pulawski (pers. comm.) has seen a specimen of *T. semirufus* pinned with a nymphal *Capnobates* sp., probably *occidentalis* (Thomas) (Tettigoniidae). These are the only prey records known for this species of *Tachysphex* and they indicate a specificity for long-horned grasshoppers.

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